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EXAMINER

CHOKSHI, PINKAL R

ART UNIT

PAPER NUMBER

2425

MAIL DATE

DELIVERY MODE

04/25/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/577,816

Applicant(s)

KIM ET AL.

Examiner

Pinkal R. Chokshi

Art Unit

2425

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/04/2011 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claim 18 have been considered but are moot in view of the new ground(s) of rejection. See the new rejection below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 18-21 and 27-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 7,051,325 to Choi (hereafter referenced as Choi) in view of US PG Pub 2003/0219081 to Sheehan (hereafter referenced as Sheehan) and US Patent 6,065,880 to Thompson (hereafter referenced as Thompson).

Regarding **claim 18**, “a method for receiving downloadable data in a data broadcast receiving apparatus” reads on the method for upgrading software in the receiving apparatus (abstract) disclosed by Choi and represented in Fig. 2.

As to “comprising the steps of: determining whether there is a downloadable data information descriptor in a broadcast stream which is received through a broadcast channel and includes the downloadable data” Choi discloses (col.2, line 55-col.3, line 48; col.3 lines 53-56) that the broadcast signal that is transmitted to the receiving apparatus includes header that contains information for software code as represented in Fig. 1.

As to “extracting downloadable data identification from the downloadable data information descriptor” Choi discloses (col.3, lines 27-42) that the software code included in the stream is extracted from the stream as represented in Fig. 2.

As to “determining the kind of the downloadable data based on the extracted downloadable data identification” Choi discloses (col.4, lines 1-3, 53-57; col.5, lines 21-25) that the receiver determines from the extracted software code whether the entire software upgrade or the patch will be performed.

As to “upgrading predetermined data in the data broadcast receiving apparatus using the downloadable data according to the kind of the downloadable data” Choi discloses (col.3, lines 43-48; col.3, line 53-col.4, line 3) that the receiver upgrades the software by extracting the upgraded software data from the broadcast signal.

Choi meets all the limitations of the claim except "downloadable data information in a broadcast stream includes data identification." However, Sheehan discloses (§§0049, §0053) that the broadcast signal transmitted to the receiver includes software upgrade data, where the receiver checks the data_type field to determine the type of data used in payload as represented in Fig. 7 (element 730). Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Choi's system by using data identification field in the downloadable data information as taught by Sheehan in order to deliver correct software updates to set top boxes made by different manufacturers (§0006).

Combination of Choi and Sheehan meets all the limitations of the claim except "wherein the kind of downloadable data includes a middleware module for accessing a mobile terminal." However, Thompson discloses (col.1, lines 22-24; col.5, lines 9-17) that the appropriate software is loaded into the apparatus which is then used to access the remote device to communicate information between the apparatus and the remote device as represented in Fig. 4. Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Choi and Sheehan's systems by receiving software data for accessing a mobile device as taught by Thompson in order to effectively communicate with the mobile device.

Regarding **claim 19**, "the method as recited in claim 18, wherein the

downloadable data information descriptor is transmitted through at least one among Program Specific Information (PSI) of the Moving Picture Experts Group (MPEG)-2 system, Data Service Table (DST) of the Advanced Television Systems Committee (ATSC) data broadcasting, Application Information Table (AIT) of the DVB-Multimedia Home Platform (MHP), and System Information (SI) of the Digital Multimedia Broadcasting (DMB)" combination of Choi and Sheehan teaches this limitation, where Choi discloses (col.5, lines 40-47) that the upgraded software data inserted in the broadcasting signal is transmitted using MPEG and DTV in the Advanced Television Systems Committee (ATSC) and Sheehan discloses (§0030) that the ATSC has defined a structure for tables used in the PSI standard. In addition, same motivation is used as rejection to claim 18.

Regarding **claim 20**, "the method as recited in claim 18, wherein the kind of the downloadable data further includes a middleware plug-in" Choi discloses (col.5, lines 21-25) that the receiver upgrades software in either patches (middleware plug-in) or to the whole system (middleware module).

Regarding **claim 21**, "the method as recited in claim 18, wherein said upgrading predetermined data in the data broadcast receiving apparatus using the downloadable data includes the steps of: determining whether a version of the downloadable data is the same as a version of the predetermined data in the

data broadcast receiving apparatus; and setting up the downloadable data if the version of the downloadable data is not the same as the version of the predetermined data in the data broadcast receiving apparatus” Choi discloses (col.3, line 53-col.4, line 3) that the version comparing unit compares the version of the downloaded software data and version of a software data previously installed in the memory to determine a newer version and installs the upgraded software data.

Regarding **claim 27**, “a data broadcast receiving apparatus for receiving downloadable data” reads on the method for upgrading software in the receiving apparatus (abstract) disclosed by Choi and represented in Fig. 2.

As to “comprising: a demultiplexing component to demultiplex a broadcast stream which is received through a broadcast channel and includes the downloadable data” Choi discloses (col.2, line 55-col.3, line 48; col.3 lines 53-56) that the broadcast signal that is transmitted to the receiving apparatus includes header that contains information for software code as represented in Fig. 1. Choi also discloses (col.3, lines 27-42) that the software code included in the stream is extracted from the stream as represented in Fig. 2.

As to “a download processing component to determine whether there is a downloadable data information descriptor in the broadcast stream demultiplexed in the demultiplexing component and to determine the kind of the downloadable data based on downloadable data identification extracted from the downloadable

data information descriptor” Choi discloses (col.2, line 55-col.3, line 48; col.3 lines 53-56) that the broadcast signal that is transmitted to the receiving apparatus includes header that contains information for software code as represented in Fig. 1. Choi further discloses (col.4, lines 1-3, 53-57; col.5, lines 21-25) that the receiver determines from the extracted software code whether the entire software upgrade or the patch will be performed.

As to “a processing component to upgrade predetermined data using the downloadable data according to the kind of the downloadable data determined in the download processing component” Choi discloses (col.3, lines 43-48; col.3, line 53-col.4, line 3) that the receiver upgrades the software by extracting the upgraded software data from the broadcast signal.

Choi meets all the limitations of the claim except “downloadable data information in a broadcast stream includes data identification.” However, Sheehan discloses (§0049, §0053) that the broadcast signal transmitted to the receiver includes software upgrade data, where the receiver checks the data_type field to determine the type of data used in payload as represented in Fig. 7 (element 730). Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Choi’s system by using data identification field in the downloadable data information as taught by Sheehan in order to deliver correct software updates to set top boxes made by different manufacturers (§0006).

Regarding **claim 28**, "the data broadcast receiving apparatus as recited in claim 27, wherein the downloadable data information descriptor is transmitted through at least one among Program Specific Information (PSI) of the Moving Picture Experts Group (MPEG)-2 system, Data Service Table (DST) of the Advanced Television Systems Committee (ATSC) data broadcasting, Application Information Table (AIT) of the DVB-Multimedia Home Platform (MHP), and System Information (SI) of the Digital Multimedia Broadcasting (DMB)" combination of Choi and Sheehan teaches this limitation, where Choi discloses (col.5, lines 40-47) that the upgraded software data inserted in the broadcasting signal is transmitted using MPEG and DTV in the Advanced Television Systems Committee (ATSC) and Sheehan discloses (¶0030) that the ATSC has defined a structure for tables used in the PSI standard. In addition, same motivation is used as rejection to claim 27.

Regarding **claim 29**, "the data broadcast receiving apparatus as recited in claim 27, wherein the kind of the downloadable data further includes a middleware plug-in" Choi discloses (col.5, lines 21-25) that the receiver upgrades software in either patches (middleware plug-in) or to the whole system (middleware module).

Regarding **claim 30**, "the data broadcast receiving apparatus as recited in

claim 27, wherein the processing component sets up the downloadable data if a version of the downloadable data is not the same as a version of the predetermined data" Choi discloses (col.3, line 53-col.4, line 3) that the version comparing unit compares the version of the downloaded software data and version of a software data previously installed in the memory to determine a newer version and installs the upgraded software data.

5. **Claims 22 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view of Sheehan and Thompson as applied to claims 20 and 29 above, and further in view of US Patent 6,078,951 to Pashupathy (hereafter referenced as Pashupathy).

Regarding **claim 22**, combination of Choi, Sheehan, and Thompson meets all the limitation of the claim except "the method as recited in claim 20, wherein said upgrading predetermined data in the data broadcast receiving apparatus using the downloadable data includes the steps of: checking whether a Multipurpose Internet Mail Extensions (MIME) format of the downloadable data is registered if the kind of the downloadable data is the middleware plug-in." However, Pashupathy discloses (col.1, lines 24-31; col.4, lines 28-30, 38-41) that the downloaded software program includes MIME format listed in table for STB is registered as represented in Figs. 3 and 4 (elements 320, 420).

As to "registering the MIME format of the downloadable data if the MIME format of the downloadable data is not registered; and setting up the

downloadable data" Pashupathy discloses (col.4, lines 50-56) that given a MIME format, client device is updated each time a new program format is received and installed onto the client device. Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Choi, Sheehan, and Thompson's inventions by using MIME format for downloaded data as taught by Pashupathy so the user does not have to search for the program that supports specific format by regularly updating the table (col.1, lines 36-37).

Regarding **claim 31**, combination of Choi, Sheehan, and Thompson meets all the limitation of the claim except "the data broadcast receiving apparatus as recited in claim 29, wherein the processing component checks whether a Multipurpose Internet Mail Extensions (MIME) format of the downloadable data is registered if the kind of the downloadable data is the middleware plug-in." However, Pashupathy discloses (col.1, lines 24-31; col.4, lines 28-30, 38-41) that the downloaded software program includes MIME format listed in table for STB is registered as represented in Figs. 3 and 4 (elements 320, 420).

As to "registers the MIME format of the downloadable data if the MIME format of the downloadable data is not registered, and sets up the downloadable data" Pashupathy discloses (col.4, lines 50-56) that given a MIME format, client device is updated each time a new program format is received and installed onto the client device. Therefore, it would have been obvious to one of the ordinary

skills in the art at the time of the invention to modify Choi, Sheehan, and Thompson's inventions by using MIME format for downloaded data as taught by Pashupathy so the user does not have to search for the program that supports specific format by regularly updating the table (col.1, lines 36-37).

6. **Claims 23, 24, 26, 32, 33, and 35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view of Sheehan and Thompson as applied to claims 18 and 27 above, and further in view of US PG Pub 2004/0016002 to Handelman (hereafter referenced as Handelman).

Regarding **claim 23**, "the method as recited in claim 18, further comprising the steps of: "accessing the mobile terminal using the downloadable data if the downloadable data includes the middleware module capable of accessing the mobile terminal" Thompson discloses (col.1, lines 22-24; col.5, lines 9-17) that the appropriate software is loaded into the apparatus which is then used to access the remote device to communicate information between the apparatus and the remote device as represented in Fig. 4.

Combination of Choi, Sheehan, and Thompson meets all the limitations of the claim except "checking whether the downloadable data includes the middleware module capable of accessing the mobile terminal." Handelman discloses (¶0139) that the downloaded data is checked and tested to determine the correct operation of it. Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Choi, Sheehan, and

Thompson's systems by checking the downloadable data as taught by Handelman in order to upgrade consumer appliance with correct version.

Regarding **claim 24**, "the method as recited in claim 18, further comprising the step of: transmitting and receiving interactive data through a mobile communication network connected with the mobile terminal using the mobile terminal" Handelman discloses (§§0127, §0139, §0140) that the computer system appliance communicates with the hardware device of STB, where the reconfiguration data is received and installed, and using the reconfiguration data, its designed to support an OS of appliance, which is used to support various types of applications. Handelman further discloses (§0127) that the appliance communicates with the hardware device of STB via the telephone network in order to use the reconfiguration data. Handelman further discloses (§0099) that the authentication procedure is performed by the user device. In addition, same motivation is used as rejection to claim 23.

Regarding **claim 26**, "the method as recited in claim 23, wherein said accessing the mobile terminal using the downloadable data includes the step of: executing user authentication using the downloadable data" Handelman discloses (§§0127, §0139, §0140) that the computer system appliance communicates with the hardware device of STB, where the reconfiguration data is received and installed, and using the reconfiguration data, its designed to

support an OS of appliance, which is used to support various types of applications. Handelman further discloses (¶0127) that the appliance communicates with the hardware device of STB via the telephone network in order to use the reconfiguration data. Handelman further discloses (¶0099) that the authentication procedure is performed by the user device. In addition, same motivation is used as rejection to claim 23.

Regarding **claim 32**, "the data broadcast receiving apparatus as recited in claim 27, further comprising: a mobile terminal accessing component to access the mobile terminal using the downloadable data if the downloadable data includes the middleware module capable of accessing the mobile terminal" Thompson discloses (col.1, lines 22-24; col.5, lines 9-17) that the appropriate software is loaded into the apparatus which is then used to access the remote device to communicate information between the apparatus and the remote device as represented in Fig. 4. However, combination of Choi, Sheehan, and Thompson does not explicitly teach that the downloadable data includes the middleware module capable of accessing the mobile terminal." Handelman discloses (¶0139) that the downloaded data is checked and tested to determine the correct operation of it. Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Choi, Sheehan, and Thompson's systems by checking the downloadable data as taught by Handelman in order to upgrade consumer appliance with correct version.

Regarding **claim 33**, “the data broadcast receiving apparatus as recited in claim 32, wherein the mobile terminal accessing component transmits and receives interactive data through a mobile communication network connected with the mobile terminal using the mobile terminal” Handelman discloses (§§0127, §0139, §0140) that the computer system appliance communicates with the hardware device of STB, where the reconfiguration data is received and installed, and using the reconfiguration data, its designed to support an OS of appliance, which is used to support various types of applications. Handelman further discloses (§0127) that the appliance communicates with the hardware device of STB via the telephone network in order to use the reconfiguration data. Handelman further discloses (§0099) that the authentication procedure is performed by the user device. In addition, same motivation is used as rejection to claim 32.

Regarding **claim 35**, “the data broadcast receiving apparatus as recited in claim 32, wherein the mobile terminal accessing component executes user authentication using the downloadable data” Handelman discloses (§0127, §0139, §0140) that the computer system appliance communicates with the hardware device of STB, where the reconfiguration data is received and installed, and using the reconfiguration data, its designed to support an OS of appliance, which is used to support various types of applications. Handelman further

discloses (§10127) that the appliance communicates with the hardware device of STB via the telephone network in order to use the reconfiguration data.

Handelman further discloses (§10099) that the authentication procedure is performed by the user device. In addition, same motivation is used as rejection to claim 32.

7. **Claims 25 and 34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi in view of Sheehan, Thompson and Handelman as applied to claims 23 and 32 above, and further in view of US PG Pub 2004/0123332 to Hanson (hereafter referenced as Hanson).

Regarding **claim 25**, combination of Choi, Sheehan, Thompson, and Handelman meets all the limitations of the claim except “the method as recited in claim 23, wherein said checking whether the downloadable data includes the middleware module capable of accessing the mobile terminal includes checking whether the downloadable data includes the middleware module capable of executing an access to the mobile terminal, the access to the mobile terminal being requested from a user.” However, Hanson discloses (§10095) that the user at the remote terminal accesses the transmitted software program by a request for Internet access. Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Choi, Sheehan, Thompson and Handelman’s systems by submitting a user request to for accessing mobile

terminal as taught by Hanson in order to test and verify the upgraded software program.

Regarding **claim 34**, combination of Choi, Sheehan, Thompson and Handelman meets all the limitations of the claim except "the data broadcast receiving apparatus as recited in claim 32, wherein the mobile terminal accessing component accesses the mobile terminal after receiving a request for an access to the mobile terminal from a user." However, Hanson discloses (§0095) that the user at the remote terminal accesses the transmitted software program by a request for Internet access. Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Choi, Sheehan, Thompson and Handelman's systems by submitting a user request to for accessing mobile terminal as taught by Hanson in order to test and verify the upgraded software program.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pinkal R. Chokshi whose telephone number is (571) 270-3317. The examiner can normally be reached on Monday-Friday 8 - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian T. Pendleton can be reached on 571-272-7527. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Pinkal R. Chokshi/
Examiner, Art Unit 2425

/Brian T Pendleton/
Supervisory Patent Examiner, Art Unit 2425